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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/505,163	08/30/2004	Juergen Schroeder	257542US0PCT	5466
22850	7590	07/25/2006	EXAMINER	
C. IRVIN MCCLELLAND OBLON, SPIVAK, MCCLELLAND, MAIER & NEUSTADT, P.C. 1940 DUKE STREET ALEXANDRIA, VA 22314			EL ARINI, ZEINAB	
			ART UNIT	PAPER NUMBER
			1746	

DATE MAILED: 07/25/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

<b>Office Action Summary</b>	<b>Application No.</b>		<b>Applicant(s)</b>	
	10/505,163		SCHROEDER ET AL.	
	<b>Examiner</b>		<b>Art Unit</b>	
	Zeinab E. EL-Arini		1746	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --  
**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

#### Status

- 1) ☒ Responsive to communication(s) filed on 21 June 2006.
- 2a) ☐ This action is **FINAL**.                      2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

#### Disposition of Claims

- 4) ☒ Claim(s) 1-5 and 7-12 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-5 and 7-12 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

#### Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
 Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
 Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

#### Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All    b) ☐ Some \* c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
  2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

#### Attachment(s)

- |  |   |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892)  | 4) <input type="checkbox"/> Interview Summary (PTO-413)<br>Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)                                   | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152)             |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)<br>Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____  |

**DETAILED ACTION**

***Continued Examination Under 37 CFR 1.114***

1. A request for continued examination under 37 CFR 1.114, including the fee set forth in 37 CFR 1.17(e), was filed in this application after final rejection. Since this application is eligible for continued examination under 37 CFR 1.114, and the fee set forth in 37 CFR 1.17(e) has been timely paid, the finality of the previous Office action has been withdrawn pursuant to 37 CFR 1.114. Applicant's submission filed on 6/21/06 has been entered.

**The amendment and remarks filed 6/21/06 have been acknowledged and entered.**

***Claim Rejections - 35 USC § 112***

***The rejection under 35 U.S.C. 112, second paragraph stated in paper No. 013106 has been withdrawn in view of applicants' amendment.***

***Claim Rejections - 35 USC § 103***

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claims 1-5, and 7-12 are rejected under 35 U.S.C. 103(a) as being unpatentable over WO 01/51159 A1 (WO'159)(Neutzner et al.) in combination with Dunson et al. (3,969,094) or Koch (3,958,964) new references.

WO'159 discloses a method for cleaning rectification columns that are used for rectifying (meth) acrylic acid and/ or esters thereof (see page 3, line 12- page 4, line 38, page 6, lines 16-41, and page 10, lines 4-22. The reference discloses the basic liquid (sodium hydroxide) and gas (steam or air) are guided through the column in the counter current. The reference discloses all limitations with the exception of the pressure difference between the pressure in the gas phase immediately above the uppermost tray of the tray column and the pressure in the gas phase immediately below the lowermost tray of the tray column divided by the number of the trays in the column is at least 0.5 mbar per tray, and the range claimed in claims 2-3.

Dunson et al. disclose baffle tray columns can be used as scrubbers for the cleaning of the flue gases. The reference discloses the relation between the difference of the pressure and the number of trays. See the abstract, col. 6, line 5- col. 8, line 35.

Koch discloses a column for bringing gases or vapors and liquids into contact which uses a plurality of plated. See the abstract. The reference discloses the relation between the difference of pressure and the dimension of the column. See col. 1, lines 40-43, claim 1 and the document in general.

It would have been obvious for one of ordinary skill in the art to incorporate the difference between the pressure in the gas phase immediately above the uppermost tray of the tray column and the pressure in the gas phase immediately below the lowermost tray of the tray column divided by the number of the trays in the column in the WO'159 process to obtain the claimed process. This is because according to

Dunson et al. and Koch, one skilled in the art would adjust the difference of the pressure to obtain the optimum results and to enhance the cleaning process.

It would have been obvious for one skilled in the art to incorporate this limitation into the method described in WO'159 as a conventional measure for solving the specified problem because it is known to a person skilled in the art that there is a decline in pressure when a gas stream and a liquid are run countercurrent to each other. The selection of a decline in pressure of at least 0.5 mbar per plate could only be regarded as inventive if this pressure decline of at least 0.5 mbar per plate brings about unexpected effects or properties in relation to the rest of the range. Re. the limitation of claim 7, see page 7. Re. the limitations of claims 8-11, see pages 8 and 9. Re. the limitation of claim 12, see page 10.

### ***Response to Arguments***

1. Applicant's arguments filed 10/24/05 have been fully considered but they are not persuasive. Applicants' argument with respect to Neutzner et al do not discuss a pressure difference within the stripping column is unpersuasive, because it would have been obvious for one of ordinary skill in the art to incorporate this limitation into the method described in WO'159 as a conventional measure for solving the specified problem because it is known to a person skilled in the art that there is a decline in pressure when a gas stream and a liquid are run countercurrent to each other. See Dunson et al. and Koch. The selection of a decline in pressure of at least 0.5 mbar per plate could only be regarded as inventive if this pressure decline of at least 0.5 mbar per

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plate brings about unexpected effects or properties in relation to the rest of the range. Effects or properties of this type are not, however shown in the disclosure. This is also because Neutzner et al. disclose that depending on the type of alkaline component and its concentration in the aqueous washing solution, as well as the temperature selected for cleaning, the cleaning can accure at different pressures. See page 11. This is also because one skilled in the art would expect the pressure in the Neutzner et al. will be the same or equivalent to the pressure as claimed, because the process as claimed is equivalent to the process taught by Neutzner et al.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Zeinab E. EL-Arini whose telephone number is (571) 272-1301. The examiner can normally be reached on Monday-Friday.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Michael Barr can be reached on (571) 272-1414. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

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Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

*Zeinab E. EL-Arini*  
Zeinab E. EL-Arini  
Primary Examiner  
Art Unit 1746

ZEE  
07/12/06